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### (54) VACUUM-ASSISTED ELECTROPORATION DEVICES, AND RELATED SYSTEMS AND **METHODS**

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#### (57)**ABSTRACT**

A device for vacuum-assisted in vivo electroporation of tissue includes a housing that defines a chamber and at least one opening into the chamber. A port extends through the housing, is remote from the at least one opening, and is connectable to a vacuum source. The port is configured to communicate vacuum pressure from the vacuum source to the chamber. A plurality of electrodes are positioned within the chamber and are configured to deliver one or more electroporation pulses to a targeted portion of tissue extending through the opening and held in the chamber responsive to the vacuum pressure.

